

10" Compound Power Miter Saw (Model MS250)



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DELTA[®] *ShopMaster*[™]

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ESPAÑOL: PÁGINA 23

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IMPORTANT SAFETY INSTRUCTIONS

⚠ WARNING Read and understand all warnings and operating instructions before using any tool or equipment. When using tools or equipment, basic safety precautions should always be followed to reduce the risk of personal injury. Improper operation, maintenance or modification of tools or equipment could result in serious injury and property damage. There are certain applications for which tools and equipment are designed. Delta Machinery strongly recommends that this product NOT be modified and/or used for any application other than for which it was designed.

If you have any questions relative to its application DO NOT use the product until you have written Delta Machinery and we have advised you.

Online contact form at www.deltamachinery.com

Postal Mail: Technical Service Manager
Delta Machinery
4825 Highway 45 North
Jackson, TN 38305
(IN CANADA: 125 Mural St. Suite 300, Richmond Hill, ON, L4B 1M4)

Information regarding the safe and proper operation of this tool is available from the following sources:

Power Tool Institute
1300 Sumner Avenue, Cleveland, OH 44115-2851
www.powertoolinstitute.org

National Safety Council
1121 Spring Lake Drive, Itasca, IL 60143-3201

American National Standards Institute, 25 West 43rd Street, 4 floor, New York, NY 10036 www.ansi.org
ANSI Z39.1 Safety Requirements for Woodworking Machines, and the U.S. Department of Labor regulations www.osha.gov

SAVE THESE INSTRUCTIONS!

SAFETY GUIDELINES - DEFINITIONS

It is important for you to read and understand this manual. The information it contains relates to protecting YOUR SAFETY and PREVENTING PROBLEMS. The symbols below are used to help you recognize this information.

⚠ DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
CAUTION	Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

CALIFORNIA PROPOSITION 65

⚠ WARNING **SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES** contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, always wear **MSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

GENERAL SAFETY RULES



⚠ WARNING READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. Failure to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.

IMPORTANT SAFETY INSTRUCTIONS

- FOR YOUR OWN SAFETY, READ THE INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learning the machine's application, limitations, and specific hazards will greatly minimize the possibility of accidents and injury.
- USE CERTIFIED SAFETY EQUIPMENT.** Eye protection equipment should comply with ANSI Z87.1 standards, hearing equipment should comply with ANSI S3.19 standards, and dust mask protection should comply with MSHA/NIOSH certified respirator standards. Splinters, air-borne debris, and dust can cause irritation, injury, and/or illness.
- DRESS PROPERLY.** Do not wear tie, gloves, or loose clothing. Remove watch, rings, and other jewelry. Roll up your sleeves. Clothing or jewelry caught in moving parts can cause injury.
- DO NOT USE THE MACHINE IN A DANGEROUS ENVIRONMENT.** The use of power tools in damp or wet locations or in rain can cause shock or electrocution. Keep your work area well-lit to prevent tripping or placing arms, hands, and fingers in danger.
- MAINTAIN ALL TOOLS AND MACHINES IN PEAK CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Poorly maintained tools and machines can further damage the tool or machine and/or cause injury.
- CHECK FOR DAMAGED PARTS.** Before using the machine, check for any damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, and any other conditions that may affect its operation. A guard or any other part that is damaged **should be properly repaired or replaced**. Damaged parts can cause further damage to the machine and/or injury.
- KEEP THE WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
- KEEP CHILDREN AND VISITORS AWAY.** Your shop is a potentially dangerous environment. Children and visitors can be injured.
- REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure that the switch is in the "OFF" position before plugging in the power cord. In the event of a power failure, move the switch to the "OFF" position. An accidental start-up can cause injury.
- USE THE GUARDS.** Check to see that all guards are in place, secured, and working correctly to prevent injury.
- REMOVE ADJUSTING KEYS AND WRENCHES BEFORE STARTING THE MACHINE.** Tools, scrap pieces, and other debris can be thrown at high speed, causing injury.
- USE THE RIGHT MACHINE.** Don't force a machine or an attachment to do a job for which it was not designed. Damage to the machine and/or injury may result.
- USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause damage to the machine or injury to the user.
- USE THE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. See the Extension Cord Chart for the correct size depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
- SECURE THE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. Loss of control of a workpiece can cause injury.
- FEED THE WORKPIECE AGAINST THE DIRECTION OF THE ROTATION OF THE BLADE, CUTTER, OR ABRASIVE SURFACE.** Feeding it from the other direction will cause the workpiece to be thrown out at high speed.
- DON'T FORCE THE WORKPIECE ON THE MACHINE.** Damage to the machine and/or injury may result.
- DON'T OVERREACH.** Loss of balance can make you fall into a working machine, causing injury.
- NEVER STAND ON THE MACHINE.** Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
- NEVER LEAVE THE MACHINE RUNNING UNATTENDED. TURN THE POWER OFF.** Don't leave the machine until it comes to a complete stop. A child or visitor could be injured.
- TURN THE MACHINE "OFF", AND DISCONNECT THE MACHINE FROM THE POWER SOURCE** before installing or removing accessories, before adjusting or changing set-ups, or when making repairs. An accidental start-up can cause injury.
- MAKE YOUR WORKSHOP CHILDPROOF WITH PADLOCKS, MASTER SWITCHES, OR BY REMOVING STARTER KEYS.** The accidental start-up of a machine by a child or visitor could cause injury.
- STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE. DO NOT USE THE MACHINE WHEN YOU ARE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in injury.
- THE DUST GENERATED** by certain woods and wood products can be injurious to your health. Always operate machinery in well-ventilated areas, and provide for proper dust removal. Use wood dust collection systems whenever possible.

ADDITIONAL SPECIFIC SAFETY RULES

⚠ WARNING FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

1. **DO NOT OPERATE THIS MACHINE** until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
2. **OBTAIN ADVICE** from your supervisor, instructor, or another qualified person if you are not thoroughly familiar with the operation of this machine. Knowledge is safety.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections to prevent shock or electrocution.
4. **SECURE THE MACHINE TO A SUPPORTING SURFACE.** Vibration can possibly cause the machine to slide, walk, or tip over, causing serious injury.
5. **USE ONLY CROSSCUT SAW BLADES.** Use only zero-degree or negative hook angles when using carbide-tipped blades. Do not use blades with deep gullets. These can deflect and contact the guard, and can cause damage to the machine and/or serious injury.
6. **USE ONLY BLADES OF THE CORRECT SIZE AND TYPE** specified for this tool to prevent damage to the machine and/or serious injury.
7. **USE A SHARP BLADE.** Check the blade to see if it runs true and is free from vibration. A dull blade or a vibrating blade can cause damage to the machine and/or serious injury.
8. **INSPECT BLADE FOR CRACKS** or other damage prior to operation. A cracked or damaged blade can come apart and pieces can be thrown at high speeds, causing serious injury. Replace cracked or damaged blades immediately.
9. **CLEAN THE BLADE AND BLADE FLANGES** prior to operation. Cleaning the blade and flanges allows you to check for any damage to the blade or flanges. A cracked or damaged blade or flange can come apart and pieces can be thrown at high speeds, causing serious injury.
10. **USE ONLY BLADE FLANGES** specified for this tool to prevent damage to the machine and/or serious injury.
11. **CLEAR THE AREA OF FLAMMABLE LIQUIDS** and/or gas prior to operation. Sparks can occur that would ignite the liquids and cause a fire or an explosion.
12. **CLEAN THE MOTOR AIR SLOTS** of chips and sawdust. Clogged motor air slots can cause the machine to overheat, damaging the machine and possibly causing a short which could cause serious injury.
13. **TIGHTEN THE TABLE CLAMP HANDLE** and any other clamps prior to operation. Loose clamps can cause parts or the workpiece to be thrown at high speeds.
14. **NEVER START THE TOOL** with the blade against the workpiece. The workpiece can be thrown, causing serious injury.
15. **KEEP ARMS, HANDS, AND FINGERS** away from the blade to prevent severe cuts. Clamp all workpieces that would cause your hand to be in the "Table Hazard Zone" (within the red lines).
16. **WHEN CUTTING WITH A COMPOUND SLIDING MITER SAW, PUSH THE SAW FORWARD (AWAY FROM YOU)** and toward the fence. Pulling the saw toward you can cause the saw to kick upward and toward you.
17. **WHEN USING A SLIDING MITER SAW AS A REGULAR MITER SAW, LOCK THE SLIDE MECHANISM IN PLACE.** If the slide mechanism is not locked, the saw can kick back toward you.
18. **ALLOW THE MOTOR TO COME TO FULL SPEED** prior to starting cut. Starting the cut too soon can cause damage to the machine or blade and/or serious injury.
19. **NEVER REACH AROUND** or behind the saw blade. A moving blade can cause serious injury.
20. **NEVER CUT FERROUS METALS** or masonry. Either of these can cause the carbide tips to fly off the blade at high speeds causing serious injury.
21. **NEVER CUT SMALL PIECES.** Cutting small pieces can cause your hand to move into the blade, resulting in serious injury.
22. **NEVER LOCK THE SWITCH** in the "ON" position. Setting up the next cut could cause your hand to move into the blade, resulting in severe injury.
23. **NEVER APPLY LUBRICANT** to a running blade. Applying lubricant could cause your hand to move into the blade, resulting in serious injury.
24. **DO NOT PERFORM FREE-HAND OPERATIONS.** Hold the work firmly against the fence and table. Free-hand operations on a miter saw could cause the workpiece to be thrown at high speeds, causing serious injury. Use clamps to hold the work when possible.
25. **AFTER COMPLETING CUT,** release power switch and wait for coasting blade to come to a complete stop before returning saw to raised position. A moving blade can cause serious injury.
26. **TURN OFF THE MACHINE** and allow the blade to come to a complete stop prior to cleaning the blade area or removing debris in the path of the blade. A moving blade can cause serious injury.
27. **TURN OFF MACHINE** and allow the blade to come to a complete stop before removing or securing workpiece, changing workpiece angle, or changing the angle of the blade. A moving blade can cause serious injury.
28. **PROPERLY SUPPORT LONG OR WIDE WORKPIECES.** Loss of control of the workpiece can cause injury.
29. **NEVER PERFORM LAYOUT, ASSEMBLY, OR SET-UP WORK** on the table/work area when the machine is running. A sudden slip could cause a hand to move into the blade. Severe injury can result.
30. **TURN THE MACHINE "OFF",** disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE "OFF" POSITION** to prevent unauthorized use. Someone else might accidentally start the machine and cause injury to themselves.
31. **BEFORE OPERATING THE SAW,** check and securely lock the bevel, miter, and sliding fence adjustments.
32. **ADDITIONAL INFORMATION** regarding the safe and proper operation of power tools (i.e. a safety video) is available from the Power Tool Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851 (www.powertoolinstitute.com). Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI O1.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor regulations.

SAVE THESE INSTRUCTIONS.

Refer to them often and use them to instruct others.

POWER CONNECTIONS

A separate electrical circuit should be used for your machines. This circuit should not be less than #12 wire and should be protected with a 20 Amp time lag fuse. If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the machine's plug. Before connecting the machine to the power line, make sure the switch (s) is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine. All line connections should make good contact. Running on low voltage will damage the machine.

⚠ DANGER Do not expose the machine to rain or operate the machine in damp locations.

MOTOR SPECIFICATIONS

Your machine is wired for 120 volts, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position.

GROUNDING INSTRUCTIONS

⚠ DANGER This machine must be grounded while in use to protect the operator from electric shock.

1. All grounded, cord-connected machines:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This machine is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the machine's plug, as shown in Fig. A.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected machines intended for use on a supply circuit having a nominal rating less than 150 volts:

If the machine is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. A, the machine will have a grounding plug that looks like the plug illustrated in Fig. A. A temporary adapter, which looks like the adapter illustrated in Fig. B, may be used to connect this plug to a matching 2-conductor receptacle as shown in Fig. B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. Whenever the adapter is used, it must be held in place with a metal screw.

NOTE: In Canada, the use of a temporary adapter is not permitted by the Canadian Electric Code.

⚠ DANGER In all cases, make certain that the receptacle in question is properly grounded. If you are not sure, have a qualified electrician check the receptacle.

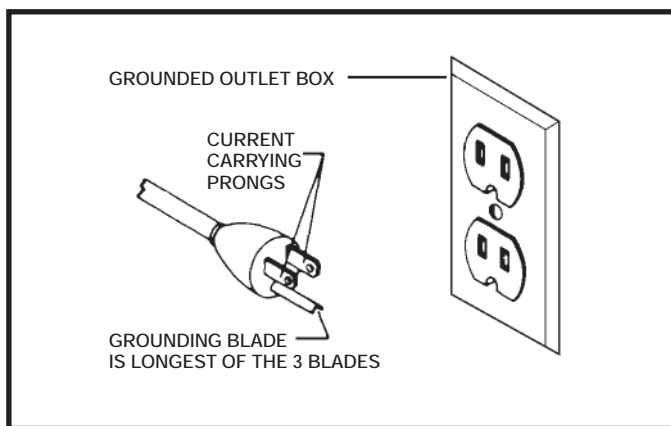


Fig. A

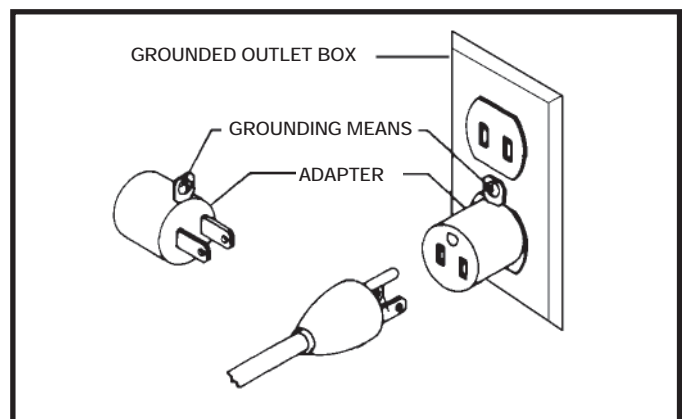


Fig. B

EXTENSION CORDS

⚠ WARNING Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the machine's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. D-1 shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
0-6	120	25-50	16 AWG
0-6	120	50-100	16 AWG
0-6	120	100-150	14 AWG
6-10	120	up to 25	18 AWG
6-10	120	25-50	16 AWG
6-10	120	50-100	14 AWG
6-10	120	100-150	12 AWG
10-12	120	up to 25	16 AWG
10-12	120	25-50	16 AWG
10-12	120	50-100	14 AWG
10-12	120	100-150	12 AWG
12-16	120	up to 25	14 AWG
12-16	120	25-50	12 AWG
12-16	120	GREATER THAN 50 FEET NOT RECOMMENDED	

Fig. B

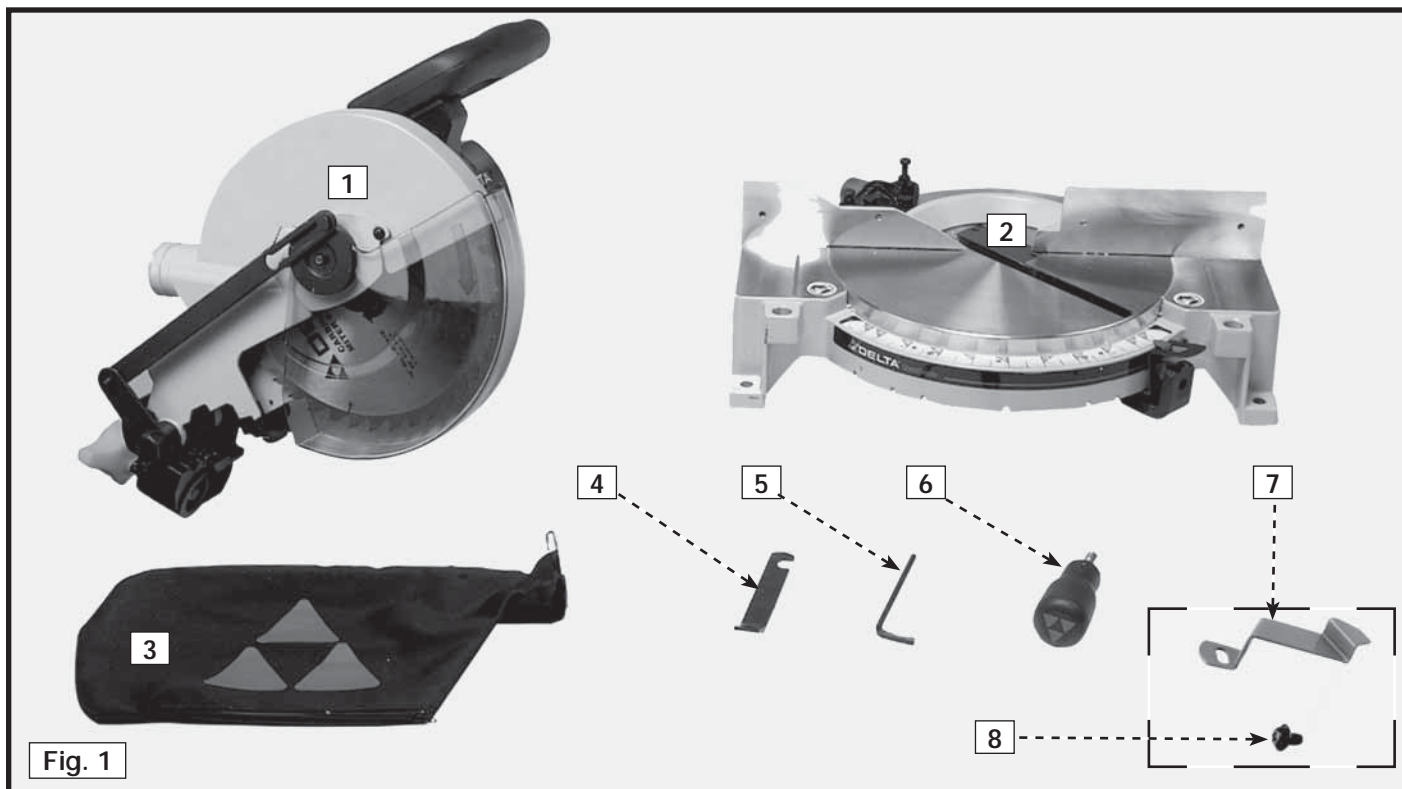
FUNCTIONAL DESCRIPTION

FOREWORD

Delta ShopMaster Model MS250 is a 10" Compound Power Miter Saw designed to cut wood, plastic, and aluminum. Compound angle and bevel cutting are easy and accurate. It can crosscut up to 5-3/4" x 2-3/8", miter at 45° both left and right up to 4-1/8" x 2-3/8", bevel at 45° left up to 5-7/8" x 1-9/16", and compound 45° x 45°, 4-1/8" x 1-9/16". It has positive miter stops at 0°, 22.5°, 31.62°, and 45° both left and right, and bevel stops at 0° and 45° adjustable. A dust bag is included to catch fine dust and wood chips.

NOTICE: The photo on the manual cover illustrates the current production model. All other illustrations contained in the manual are representative only and may not depict the actual color, labeling, or accessories, and are intended to illustrate technique only.

CARTON CONTENTS



Remove the miter saw and all loose items from the carton.

CAUTION Do not lift the miter saw by the switch handle. This action can cause misalignment. Always lift the machine by the base or the carrying handle.

- | | |
|----------------------|--|
| 1. Miter Saw Arm | 6. Table Lock Handle |
| 2. Miter Saw Base | 7. Bevel Pointer |
| 3. Dust Bag | 8. M5x.8x10mm Pan Head Screw with an
M5.3 Flat Washer |
| 4. 1/2" Blade Wrench | |
| 5. 5mm Hex Wrench | |

UNPACKING AND CLEANING

Carefully unpack the machine and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the unpainted surfaces with a good quality household floor paste wax.

ASSEMBLY

ASSEMBLY TOOLS REQUIRED

(Supplied)

* 5mm hex wrench

* 1/2" Blade wrench

(Not supplied)

* Phillips head screw driver

* A square to make adjustments

ASSEMBLY TIME ESTIMATE

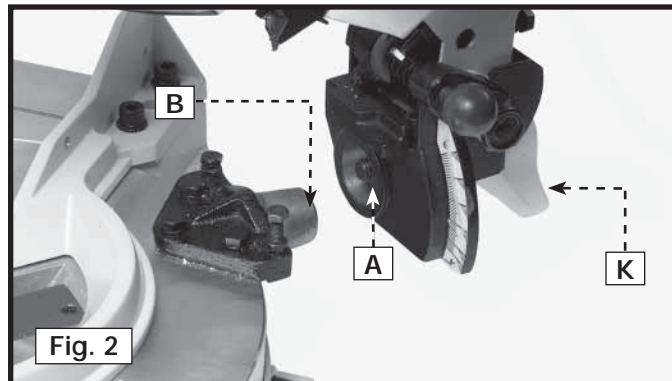
Assembly time for this product will be about 30 minutes.

⚠ WARNING For your own safety, do not connect the machine to the power source until the machine is completely assembled and you read and understand the entire instruction manual.

ATTACHING THE MITER SAW ARM TO THE BASE

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

1. Align the bevel lock handle screw (A) Fig. 2 on the miter saw arm with the bevel hub (B) on the base.
2. Thread the bevel lock handle screw (A) Fig. 2 into the bevel hub (B) by turning the bevel handle knob (K) Fig. 3.

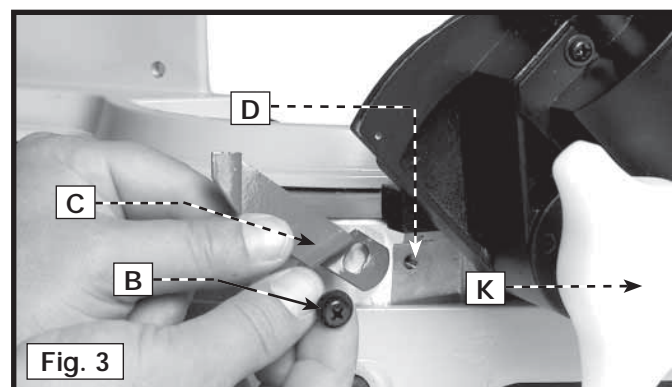


ATTACHING THE BEVEL POINTER

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

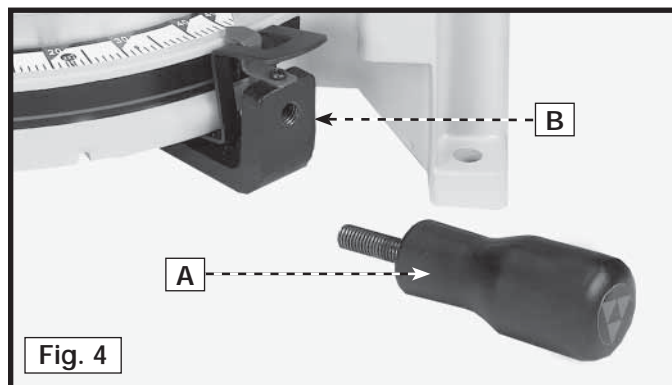
1. Loosen the bevel lock handle (K) Fig. 3, and tilt the miter saw arm to the 45 degree position.
2. Align the hole in the bevel pointer (C) Fig. 3 with the hole (D) in the back of the base.
3. Insert the M5x.8x10mm pan head screw with washer (B) Fig. 3 through the hole in the bevel pointer (C). Thread the screw into the hole (D) in the back of the base and tighten securely.

NOTE: To adjust the pointer, see the section “ADJUSTING 90° AND 45° BEVEL STOPS”.



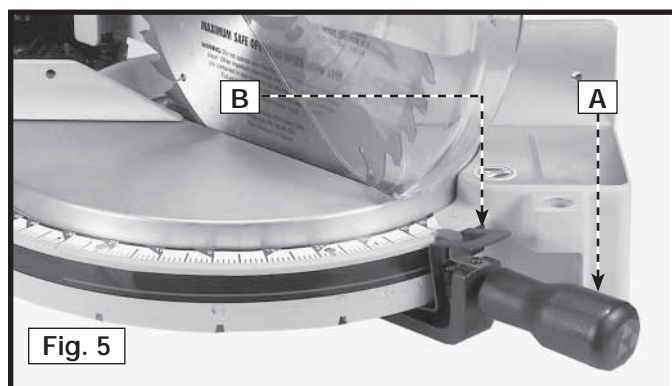
ATTACHING THE TABLE LOCK HANDLE

Thread the table lock handle (A) Fig. 4 into the threaded hole (B) of the arm bracket.

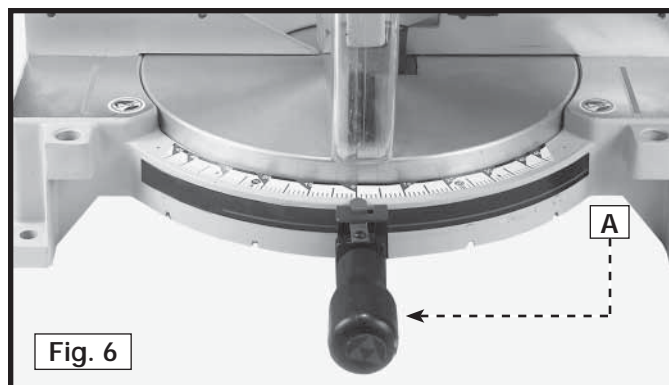


ROTATING THE TABLE TO THE 90° DEGREE POSITION

1. Turn the table lock handle (A) Fig. 5 counter-clockwise one or two turns, and depress the index lever (B) to release the 45° positive stop.

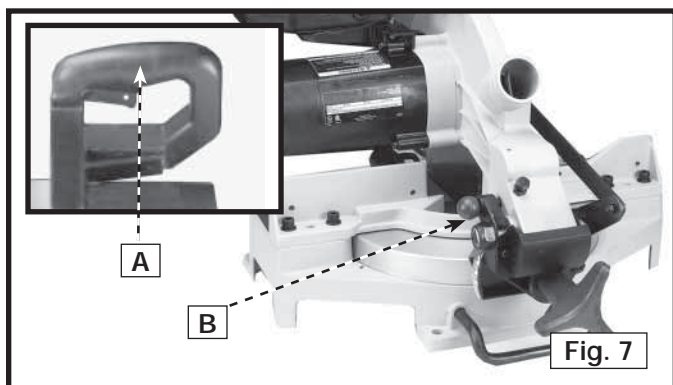


2. Rotate the table to the left until the index stop engages with the 90° positive stop (Fig. 6). Tighten the table lock handle (A).



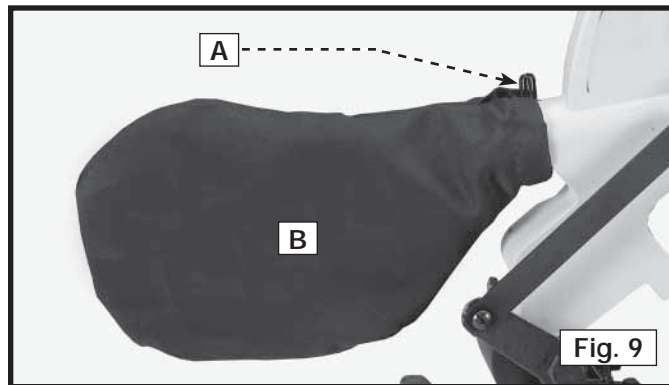
MOVING CUTTINGHEAD TO THE UP POSITION

1. Push down on handle (A), Inset, Fig. 7. Pull out the cuttinghead lock knob (B).
2. Move the cuttinghead (C) to the up position (Fig. 8).



ATTACHING THE DUST BAG

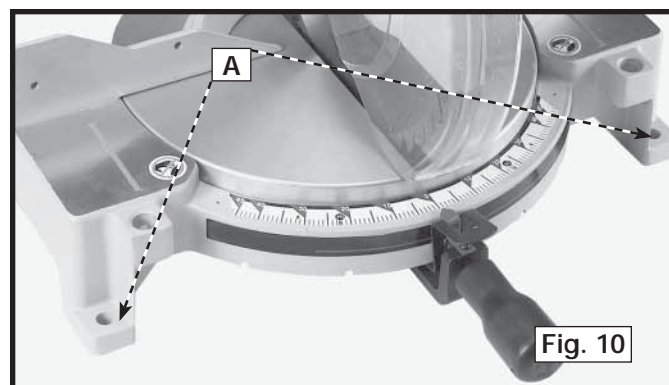
Squeeze the spring clips (A) Fig. 9 of the dust bag (B) and clip the dust bag (B) over the ribs of the dust chute.



FASTENING THE MACHINE TO A SUPPORTING SURFACE

Before operating your compound miter saw, make sure that it is firmly mounted to a sturdy workbench or other supporting surface. Four holes are provided, two of which are shown at (A) Fig. 10.

When frequently moving the saw from place to place, mount the saw on a 3/4" piece of plywood, and clamp the plywood to a supporting surface with "C" clamps.

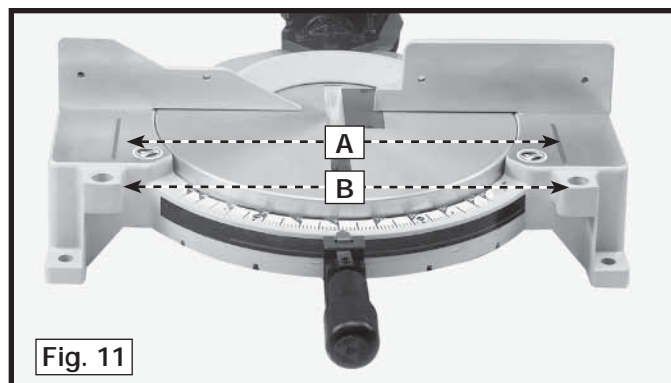


OPERATION

OPERATIONAL CONTROLS AND ADJUSTMENTS

TABLE HAZARD AREA

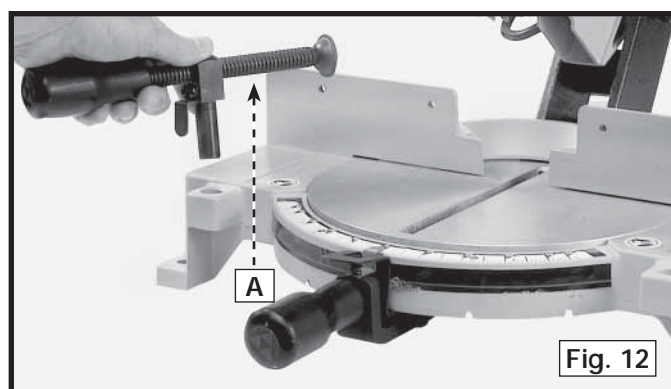
⚠ WARNING The area inside the two red lines (A) Fig. 11 on the table is designated as a hazard zone. Never place your hands inside this area while the machine is running.



USING THE OPTIONAL WORK CLAMP

1. An optional work clamp (A) Fig. 12 is available. Use this accessory clamp, especially with short workpieces. Never allow your hands to be in the "Hazard Zone".
2. Two holes (B) Fig. 11 are provided in the base of the miter saw, enabling you to use the clamp (A) Fig. 12 on either the right or left hand side of the saw blade.

⚠ WARNING Keep your hands out of path of saw blade. If necessary, clamp the workpiece in place before making the cut.



STARTING AND STOPPING THE MITER SAW

To start the miter saw, depress the switch trigger (A) Fig. 13. To stop the miter saw, release the switch trigger.

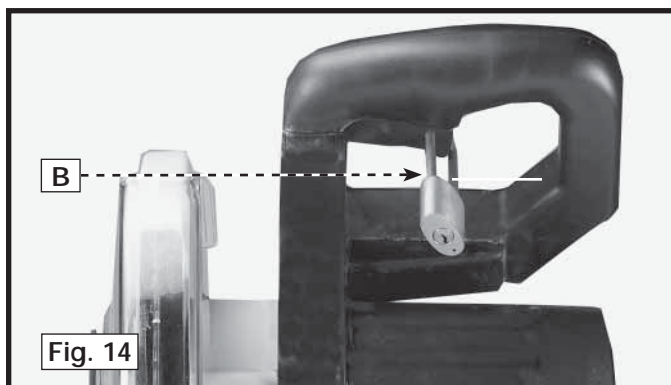
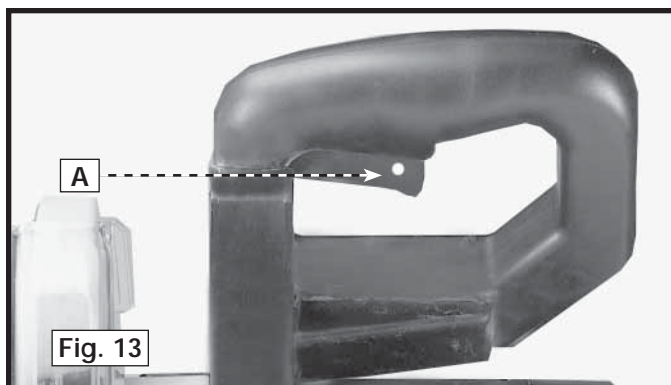
This saw is equipped with an automatic electric blade brake. As soon as the switch trigger (A) Fig. 13, is released, the electric brake is activated and stops the blade in seconds.

⚠ WARNING A turning saw blade can be dangerous. After completing cut, release switch trigger (A) Fig. 13, to activate blade brake. Keep cuttinghead down until blade has come to a complete stop.

⚠ WARNING The torque developed during braking may loosen the arbor screw (E) Fig. 47. The arbor screw should be checked periodically and tightened if necessary.

LOCKING THE SWITCH IN THE "OFF" POSITION

IMPORTANT: When the miter saw is not in use, the switch should be locked in the "OFF" position using a padlock (B) Fig. 14, with a 3/16" diameter shackle to prevent unauthorized use of the saw.



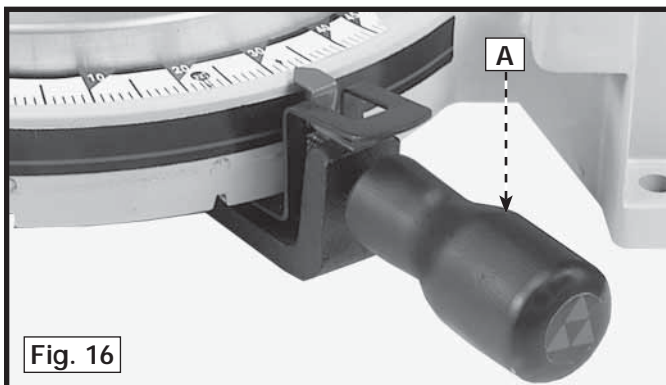
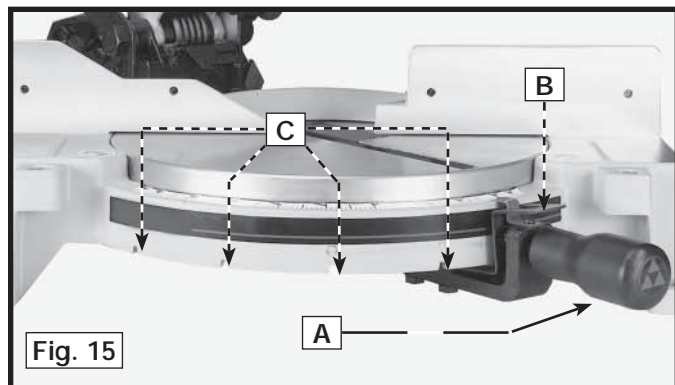
ROTATING THE TABLE FOR MITER CUTTING

Your miter saw will cut any angle from a straight 90° cut to 47° right and left. Turn the lock handle (A) Fig. 15 counter-clockwise one or two turns, depress the index lever (B), and move the control arm to the desired angle. **Tighten the lock handle (A).**

The miter saw is equipped with positive stops at the 0°, 22.5°, 31.62°, and 45° right and left positions. Loosen the lock handle (A) Fig. 15, and move the control arm until the bottom of the index lever (B) engages into one of the positive stops, four of which are shown at (C). **Tighten the lock handle (A).** To disengage the positive stop, depress the index lever (B).

A triangle indicator (D) Fig. 17 is provided on the miter scale at the 31.62° right and left miter positions for cutting crown moulding. (Refer to the "CUTTING CROWN MOULDING" section of this manual).

IMPORTANT: Always tighten the lock handle (A) Fig. 16 before cutting.

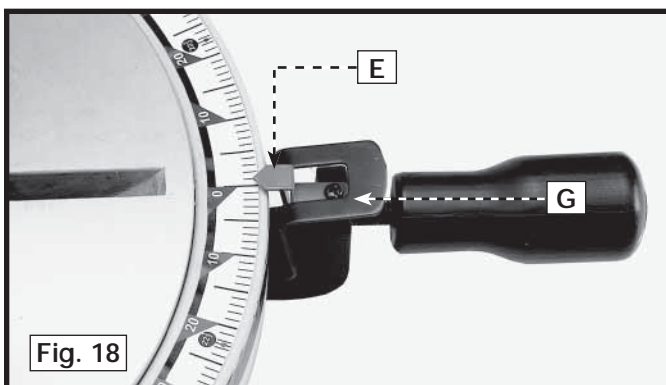
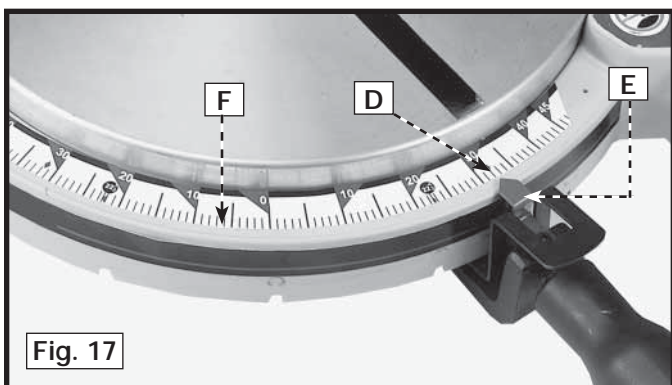


POINTER AND SCALE

The pointer (E) Fig. 17 indicates the angle of cut. Each line on the scale (F) represents 1 degree. When you move the pointer from one line to the next on the scale, you change the angle of cut by 1 degree.

ADJUSTING THE POINTER

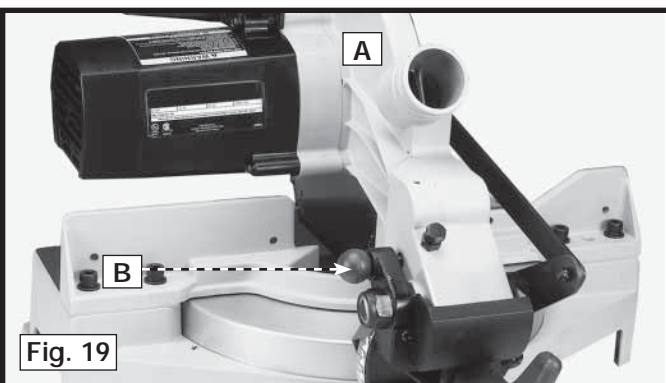
To adjust the pointer (E) Fig. 18, loosen the screw (G), adjust the pointer (E), and tighten the screw.



LOCKING THE CUTTINGHEAD IN THE DOWN POSITION

To transport the saw, always lock the cuttinghead in the down position. Lower the cuttinghead (A) Fig. 19, and push the cuttinghead lock knob (B) into the hole in the cutting arm until it locks the cuttinghead.

IMPORTANT: Carrying the machine by the switch handle will cause misalignment. Always lift the machine by the base or by the carrying handle (See Fig. 22).

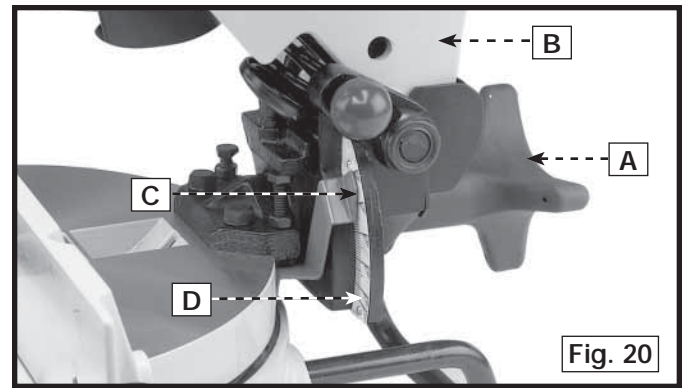


TILTING THE CUTTINGHEAD FOR BEVEL CUTTING

You can tilt the cuttinghead of your compound miter saw to cut any bevel angle from a 90° straight cut off to a 45° left bevel angle. Loosen the bevel lock handle (A) Fig. 20, tilt the cutting arm (B) to the desired angle, and tighten the lock handle (A).

Positive stops are provided to rapidly position the saw blade at 90° and 45° to the table. Refer to the section of this manual titled **"ADJUSTING 90° AND 45° BEVEL STOPS."** The bevel angle of the cuttinghead is determined by the position of the pointer (C) Fig. 20 on the scale (D).

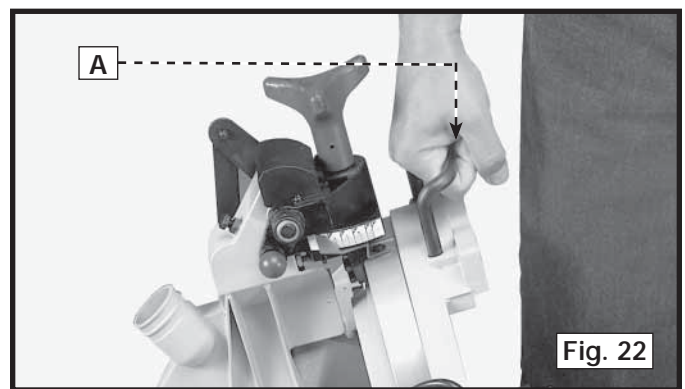
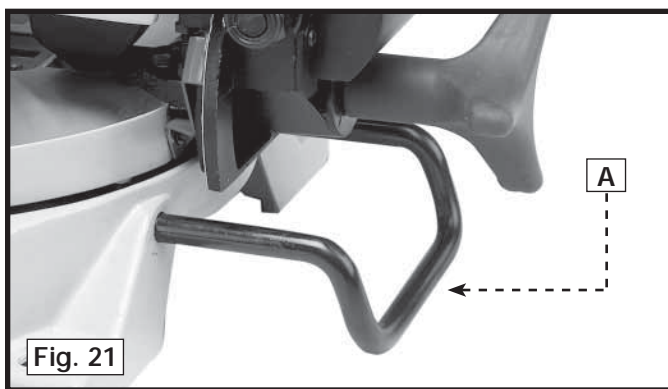
A triangle indicator is provided on the bevel scale at the 33.86° bevel angle for cutting crown moulding. Refer to the **"CUTTING CROWN MOULDING"** section of this manual.



REAR SUPPORT/CARRYING HANDLE

A rear support bar (A) Fig. 21 is provided to prevent the machine from tipping to the rear when the cuttinghead returns to the up position. For maximum support, pull the bar (A) out as far as possible.

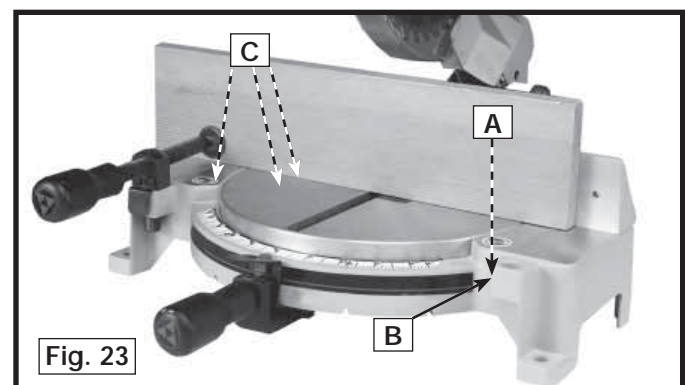
You can also use the support bar (A) Fig. 22 to carry the machine.



ADJUSTING THE BLADE PARALLEL TO THE TABLE SLOT

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

1. Lower the cutting arm. The saw blade (A) Fig. 23 should be parallel to the left edge (B) of the table opening.
2. To adjust, loosen the three bolts (C) Fig. 23 and move the cutting arm until the blade is parallel with the left edge (B) of the table opening and centered in the slot. Tighten the three bolts (C).

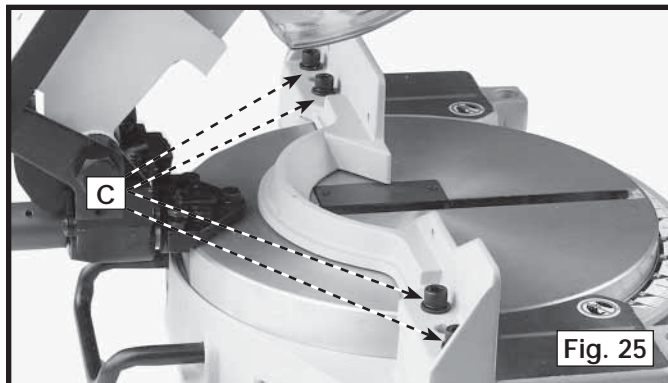
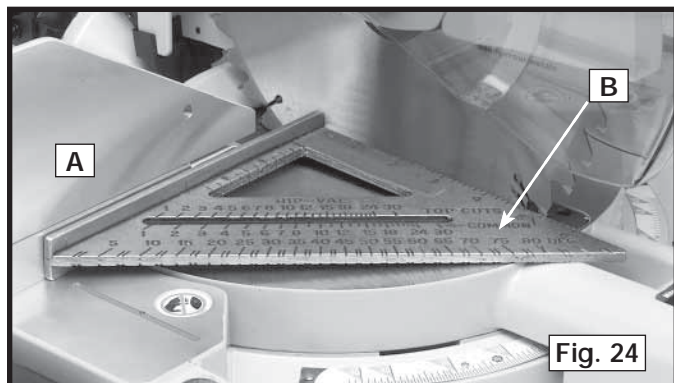


ADJUSTING THE FENCE 90° TO THE BLADE

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

If the fence (A) Fig. 24 is removed from the saw, adjust it after replacement so that it is 90° to the blade.

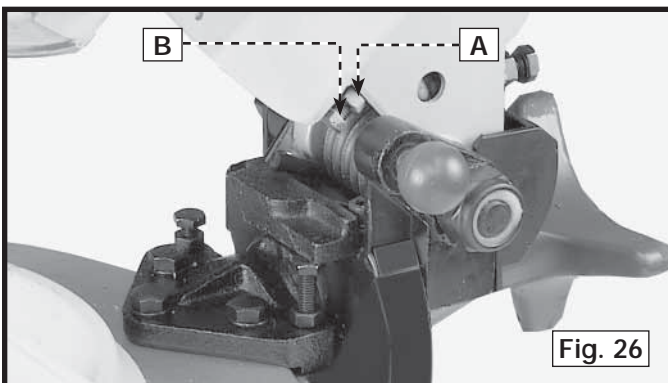
1. Place one end of the square (B) Fig. 24 against the fence (A) and the other end against the blade.
2. To adjust, loosen the four screws (C) Fig. 25, and adjust fence 90° degrees to the blade. Tighten the four screws (C).



ADJUSTING THE DOWNWARD TRAVEL OF THE SAW BLADE

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

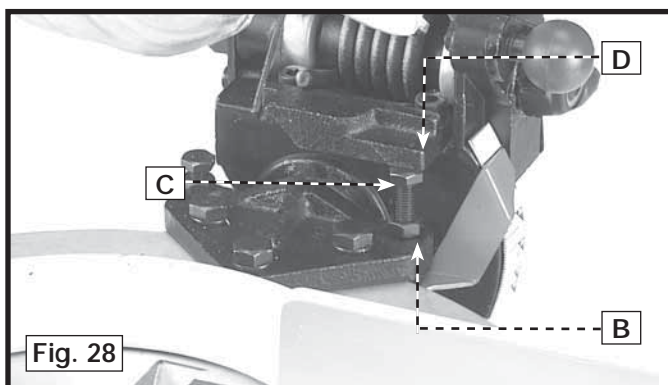
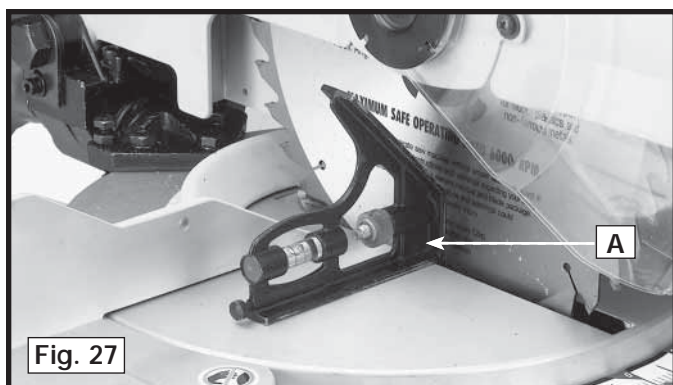
1. You can limit the downward travel of the saw blade to prevent it from contacting any metal surfaces of the machine. Make this adjustment by loosening the locknut (A) Fig. 26 and turning the adjusting screw (B) in or out.
2. Lower the blade as far as possible. Rotate the blade by hand to make certain the teeth do not contact any metal surfaces.
3. Tighten the locknut (A)



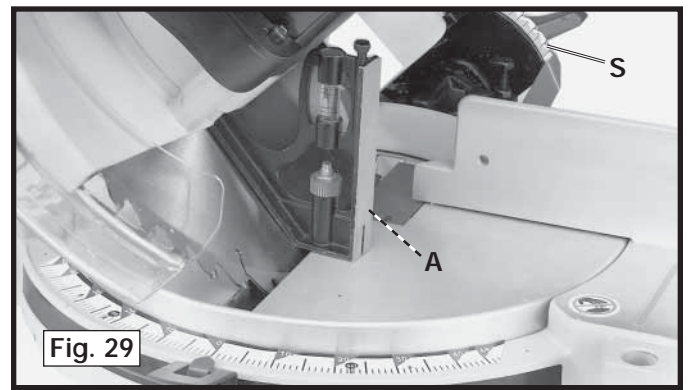
ADJUSTING 90° AND 45° BEVEL STOPS

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

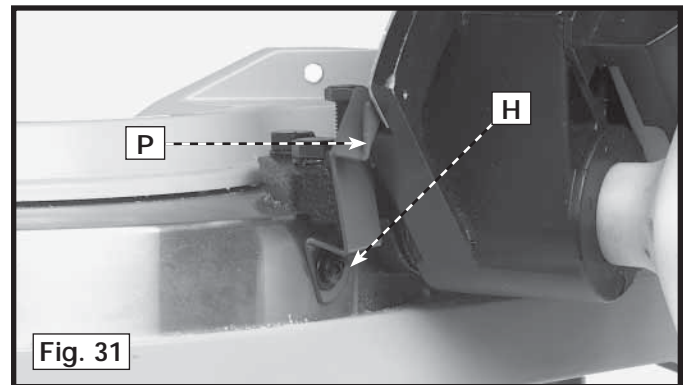
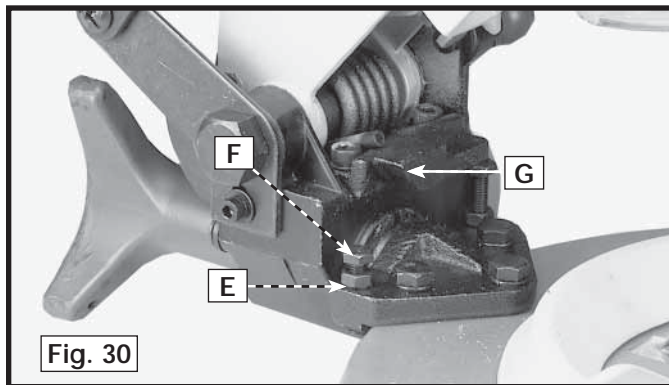
1. Loosen the bevel lock handle (A) Fig. 20 and move the cutting arm (B) Fig. 20 all the way to the right. Tighten the bevel lock handle.
2. Place one end of a square (A) Fig. 27 on the table and the other end against the blade. Check to see if the blade is 90° to the table (Fig. 27).
3. To adjust, loosen the locknut (B) Fig. 28, and turn the screw (C) until the head of the screw (C) contacts the casting (D) when blade is 90° degrees to the table. Tighten the locknut (B).



4. Loosen the bevel lock handle. Move the cutting arm all the way to the left bevel position and tighten the bevel lock handle.
5. Use a combination square (A) Fig. 29 to see if the blade is at 45° to the table.



6. To adjust, loosen the locknut (E) Fig. 30, and turn the screw (F) until it contacts the casting (G). Tighten the locknut (E).
7. Check to see that the bevel pointer (P) Fig. 31 is pointing to the 45° mark on the bevel scale (S) Fig. 29. To adjust the bevel pointer (P) Fig. 31, loosen the screw (H) and adjust pointer (P). Tighten the screw (H) securely.
8. These positive stops enable you to rapidly position the blade at the 90° and 45° bevel angle to the table.

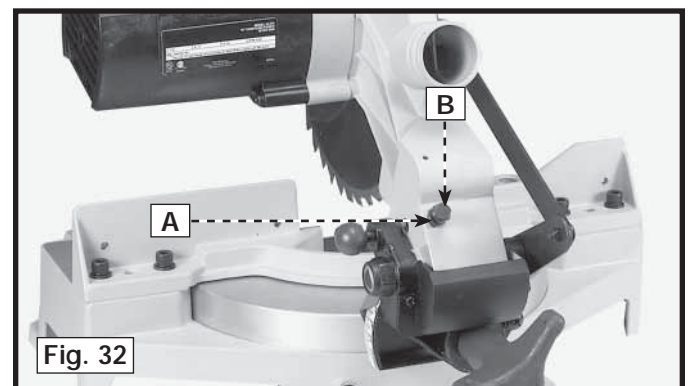


ADJUSTING THE TENSION OF THE CUTTINGHEAD RETURN SPRING

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

The tension of the cuttinghead return spring was adjusted at the factory so that the cuttinghead returns to the "up" position after cutting.

To adjust the spring tension, loosen the locknut (A) Fig. 32 and turn the screw (B) (clockwise to increase or counterclockwise to decrease the spring tension). After adjustment, tighten the locknut (A).



MACHINE USE

TYPICAL OPERATIONS AND HELPFUL HINTS

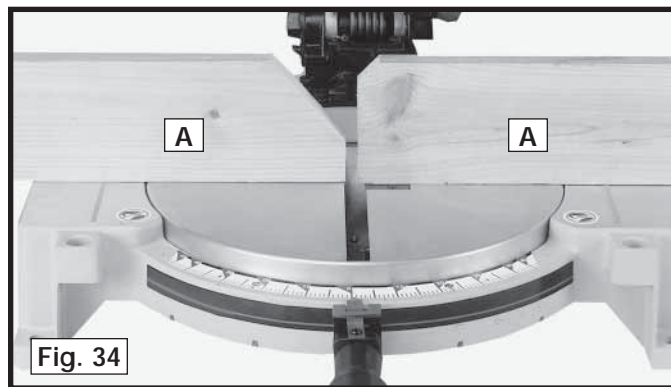
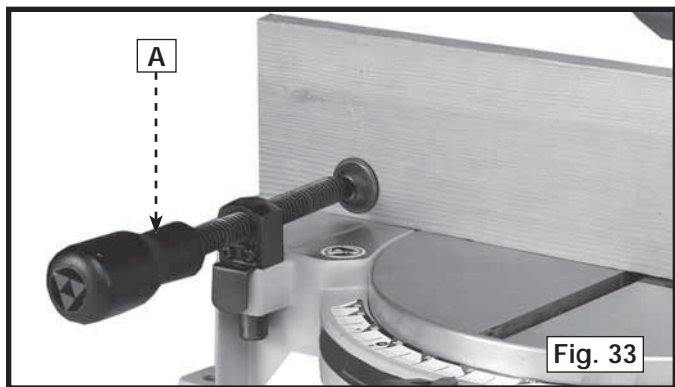
1. Before cutting, make certain that the cutting arm and table are at their correct settings and firmly locked in place.
2. Place the workpiece on the table and hold or clamp it firmly against the fence. The optional clamp (A) Fig. 33 can also be used on the right side of the machine (See Fig. 11).
3. **⚠ WARNING** If the position or size of the workpiece causes your hand to be in the "Hazard Zone", use the work clamp to secure the workpiece. Keep your hands out of the "Hazard Zone".
4. For best results, cut at a slow, even cutting rate.
5. Never attempt freehand cutting (wood that is not held firmly against the fence and table).

AUXILIARY WOOD FENCE

⚠ WARNING When performing multiple or repetitive operations that result in small cut-off pieces (one inch or less), the saw blade can catch the cut-off pieces and project them out of the machine or into the blade guard and housing, causing damage or injury. To limit the risk, mount an auxiliary wood fence on your saw (Fig. 34).

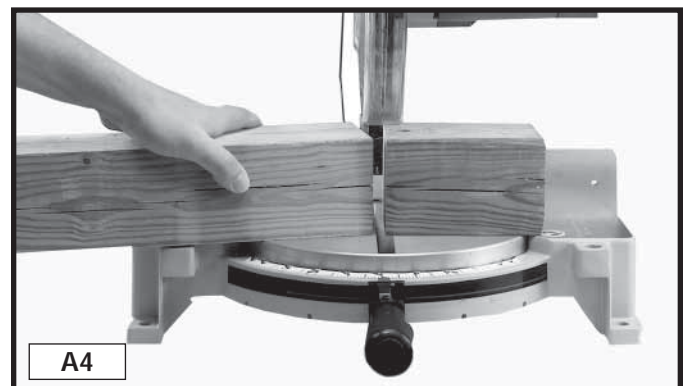
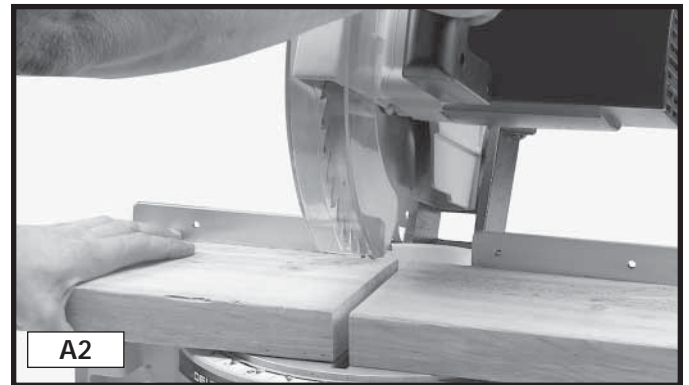
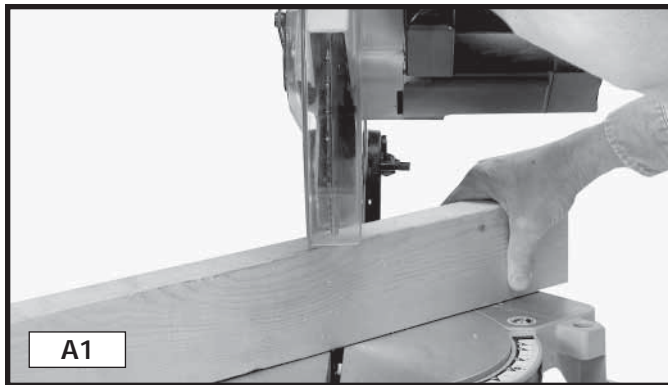
Holes are provided in the fence to attach an auxiliary fence (A) Fig. 34. This auxiliary fence is constructed of straight wood approximately 1/2" thick by 3" high by 20" long.

NOTE: The auxiliary fence (A) is used **ONLY** with the saw blade in the 0° bevel position (90° to the table). When you bevel cut (blade tilted), remove the auxiliary fence.



GENERAL CUTTING OPERATIONS

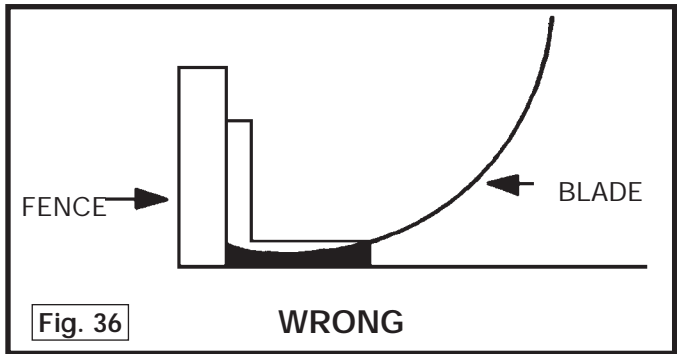
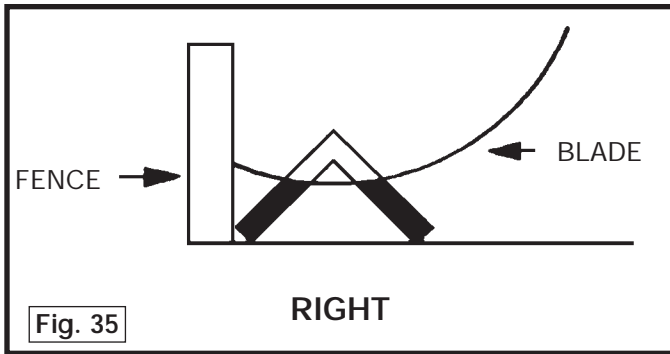
1. Your machine has the capacity to cut standard 2 x 4's, lying flat or on edge, at the 45° right and left miter angles (Fig. A1 & A2).
2. A standard 2 x 6 can be cut in the 90° straight cut-off position in one pass (Fig. A3).
3. Cutting a standard 4 x 4 can be accomplished with one pass (Fig. A4).
4. This machine has the capacity to accurately cut crown mouldings and other bevel-type cuts (Fig. A5).
5. Cutting various sizes of plastic pipe is an easy job with this machine (Fig. A6).



CUTTING ALUMINUM

Aluminum extrusions such as used for making aluminum screens and storm windows can easily be cut with your compound miter saw. When cutting aluminum extrusions, or other sections that can be cut with a saw blade and are within the capacity of the machine, position the material so the blade is cutting through the smallest cross-section (Fig. 35). The wrong way to cut aluminum angles is illustrated in Fig. 36. Be sure to apply a stick wax to the blade before cutting aluminum stock. This stick wax is available at most industrial mill supply houses. The wax provides proper lubrication and keeps chips from adhering to the blade.

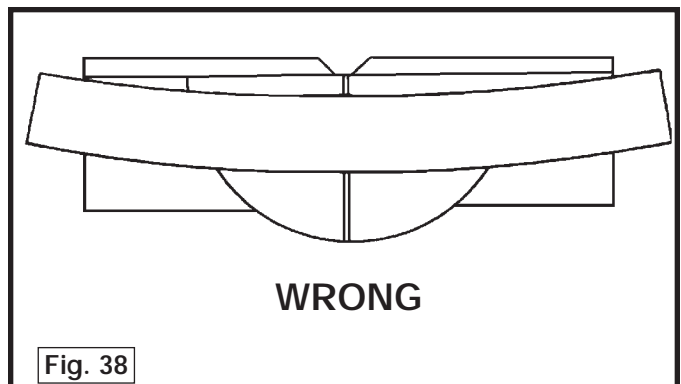
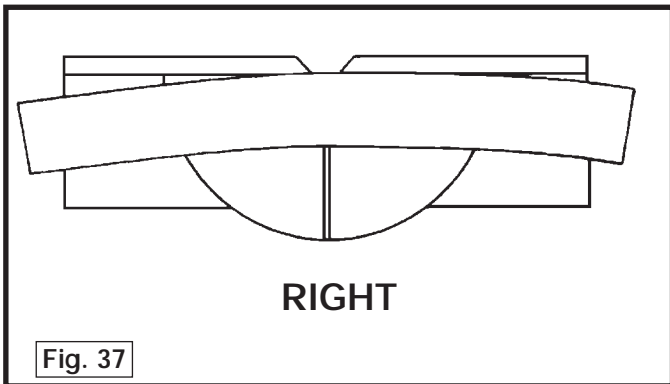
⚠ WARNING NEVER APPLY LUBRICANT TO THE BLADE WHILE THE MACHINE IS RUNNING.



CUTTING BOWED MATERIAL

Check to see if your workpiece is bowed. If it is, make sure the material is positioned on the table as shown in Fig. 37.

If the material is positioned the wrong way, as shown in Fig. 38, the workpiece will pinch the blade near the completion of the cut.

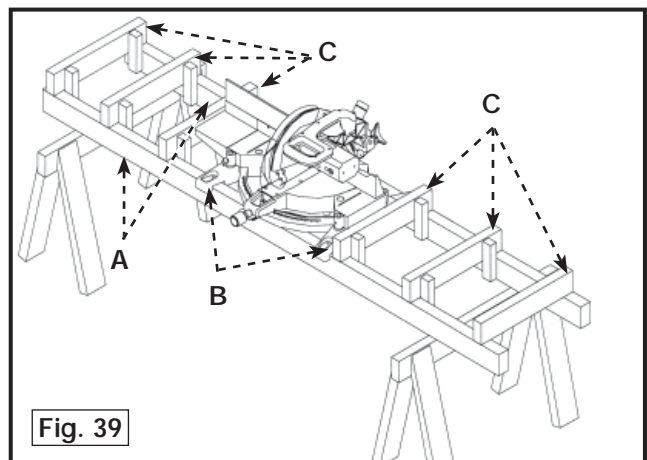


WORK SUPPORT EXTENSIONS

For support when cutting long pieces, a work support extension can be constructed. Fig. 39 illustrates the miter saw mounted to two standard 2 x 4's (A). Fasten the four mounting legs (two of which are shown at (B)) Fig. 39 to the 2 x 4's, using four screws (not supplied) through the four holes in the mounting legs. The length of the 2 x 4's (A) can vary, depending on the kind of work that will need to be cut.

NOTE: Ensure that the top of the support 2 x 4's (C) are level with the miter saw table.

This is critical because the distance from the top of the 2 x 4's (A) to the miter saw table varies from saw to saw. In most cases, standard 2 x 4's (C) can be used. If these are too high, cut the 2 x 4s (C) to provide this height or use other properly-sized wood.



CUTTING CROWN MOULDING

One of the many features of the saw is the ease of cutting crown moulding. The following is an example of cutting both inside and outside corners on **52°/38°** wall angle crown moulding.

1. Move the table to the 31.62° right miter position and lock the table in position. **NOTE:** A positive stop is provided to find this angle quickly.
2. Tilt the saw blade to the 33.86° left bevel position and tighten bevel lock handle. **NOTE:** A triangle indicator is provided on the bevel scale to find this angle quickly.
3. Place the crown moulding on the table with the **CEILING EDGE** of the moulding against the fence, and make the cut, as shown in Fig. 40.

NOTE: The piece of crown moulding used for the outside corner will always be on the right hand side of the blade, as shown at (A) Fig. 40. The piece of crown moulding used for the inside corner will always be on the left hand side of the blade, as shown at (B) Fig. 40.

4. To make the matching halves of the inside and outside corners, rotate the table to the 31.62° left miter position.

NOTE: A positive stop is provided to find this angle quickly. The saw blade is already tilted to the 33.86° left bevel position from the previous cut.

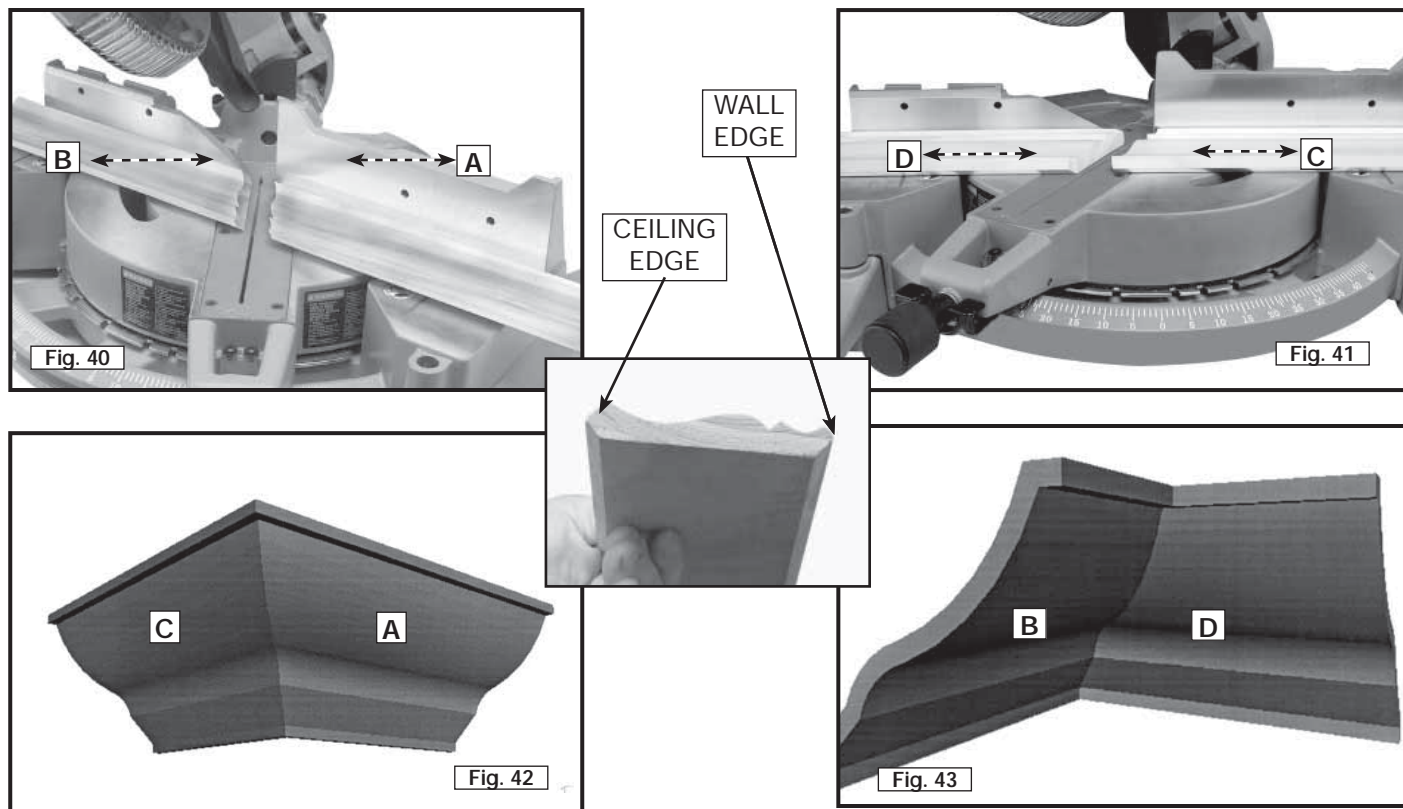
5. Place the crown moulding on the table with the **WALL EDGE** of the crown moulding against the fence and make the cut. Again, the piece of crown moulding used for the outside corner will always be on the right side of the blade, as shown at (C) Fig. 41. The piece of crown moulding used for the inside corner will always be on the left side of the blade, as shown at (D) Fig. 41.
6. Fig. 42 illustrates the two outside corner pieces; (A) being the piece cut at (A) Fig. 40 and (C) being the piece cut at (C) Fig. 41.
7. Fig. 43 illustrates the two inside corner pieces; (B) being the piece cut at (B) Fig. 40, and (D) being the piece cut at (D) Fig. 41.

45-45 CROWN MOULDING

NOTE: If you are cutting crown moulding that is **45°-45°**, follow the same procedure above, with the exception that the bevel position will always be at 30° and the miter position will be 35-1/4° to the right or left.

OTHER ANGLES

NOTE: The above instructions are assuming the angle between the walls is 90°. If you need help cutting crown moulding set at angles other than 90°, see the instruction sheet **"CUTTING CROWN MOULDING"** on the Delta Machinery web site at www.deltamachinery.com.



TROUBLESHOOTING

For assistance with your machine, visit our website at www.deltamachinery.com for a list of service centers or call the DELTA Machinery help line at 1-800-223-7278 (In Canada call 1-800-463-3582).

MAINTENANCE

CHANGING THE BLADE

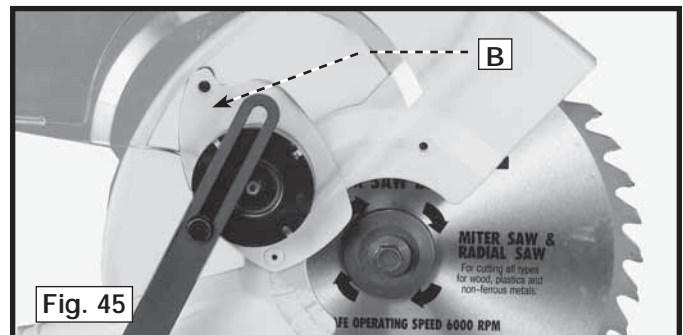
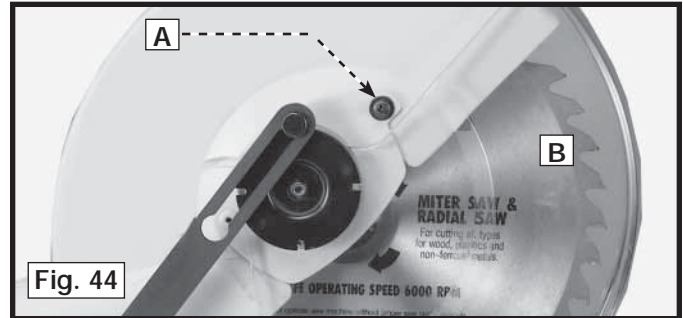
⚠ WARNING Use only cross-cutting saw blades.

⚠ WARNING When using carbide-tipped blades, do not use blades with deep gullets as they can deflect and contact the guard.

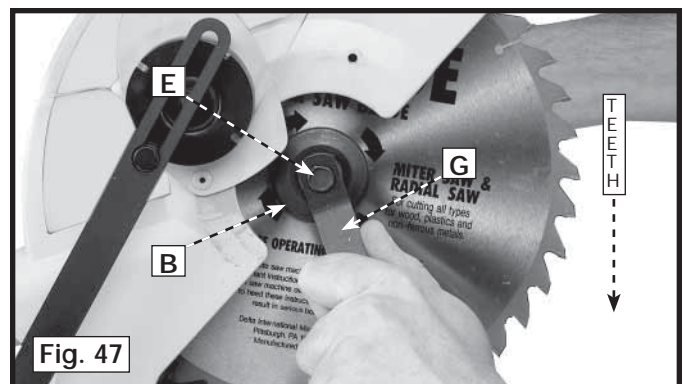
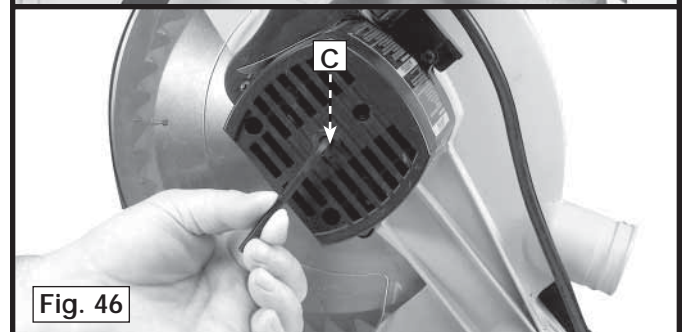
⚠ WARNING Use only 10" diameter saw blades which are rated for 5200 rpm or higher and have 5/8" diameter arbor holes.

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

1. Remove screw (A) Fig. 44 and rotate cover (B) to the rear (Fig. 45).



2. To remove the saw blade, insert the hex wrench (C) Fig. 46 into the hex hole located on the rear end of the motor shaft to keep the shaft from turning.
3. Use a wrench (G) Fig. 47 to loosen the arbor screw (E) by turning it clockwise.
4. Remove the arbor screw (E) Fig. 47, the outside blade flange (F), and the saw blade from the saw arbor.
5. Attach the new saw blade **making certain that the teeth of the saw blade are pointing down** (Fig. 47). Place the outside blade flange (F) Fig. 45 on the arbor, and attach the arbor screw (E) by turning it counter-clockwise using the wrench (G) Fig. 45. At the same time, use the hex wrench (C) Fig. 46 to keep the arbor from turning.
6. Rotate the cover back to the front and replace the screw that was removed in **STEP 1**.



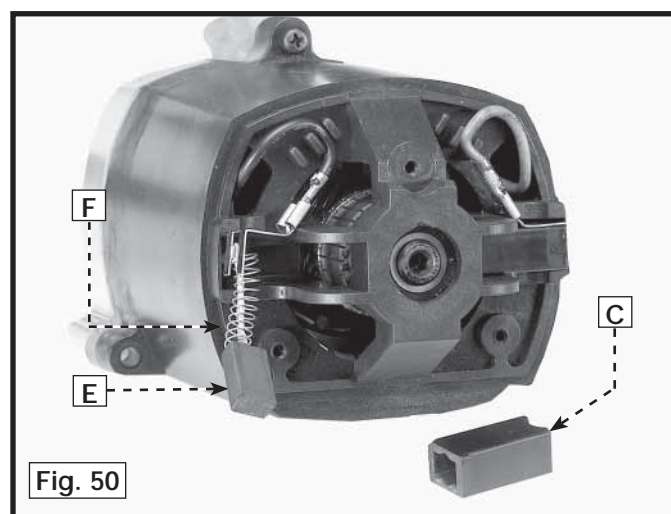
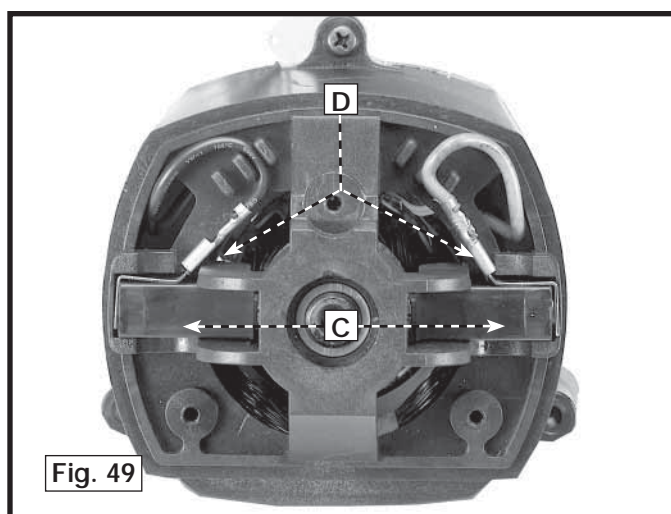
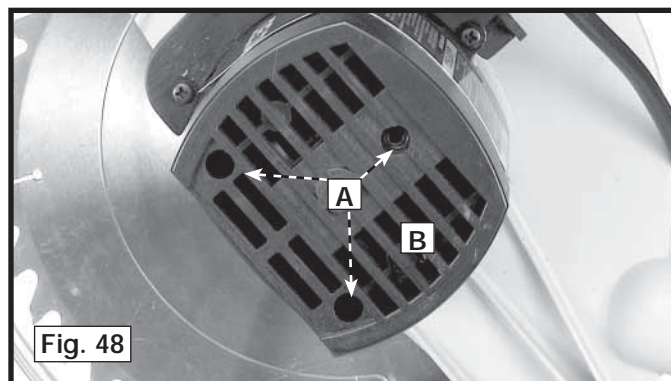
⚠ WARNING Remove wrenches (C) Fig. 46 and (G) Fig. 47 before starting machine.

BRUSH INSPECTION AND REPLACEMENT

Brush life varies. It depends on the load on the motor. Check the brushes after the first 50 hours of use for a new machine or after a new set of brushes has been installed. After the first check, examine them after about 10 hours of use until a replacement is necessary. To inspect the brushes:

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE!

1. Remove three screws (A) Fig. 48 and remove the motor cover (B).
2. The brushes are located in the two holders (C) Fig. 47. Remove spade type terminal connector (D) and pull out brush holders (C).
3. Fig. 50 illustrates one of the brushes (E) removed from the holder (C). When the carbon on either brush (E) is worn to 3/16" in length or if either spring (F) or shunt wire is burned or damaged in any way, replace both brushes. If the brushes are found to be serviceable after re-moving, reinstall them in the same position.



KEEP MACHINE CLEAN

Periodically blow out all air passages with dry compressed air. All plastic parts should be cleaned with a soft damp cloth. NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

⚠ WARNING Wear certified safety equipment for eye, hearing and respiratory protection while using compressed air.

FAILURE TO START

Should your machine fail to start, check to make sure the prongs on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

SERVICE

REPLACEMENT PARTS

Use only identical replacement parts. For a parts list or to order parts, visit our website at servicenet.deltamachinery.com. You can also order parts from your nearest factory-owned branch, or by calling our Customer Care Center at 1-800-223-7278 to receive personalized support from highly-trained technicians.

SERVICE AND REPAIRS

All quality tools will eventually require servicing and/or replacement of parts. For information about Delta Machinery, its factory-owned branches, or an Authorized Warranty

Service Center, visit our website at www.deltamachinery.com or call our Customer Care Center at 1-800-223-7278. All repairs made by our service centers are fully guaranteed against defective material and workmanship. We cannot guarantee repairs made or attempted by others.

You can also write to us for information at Delta Machinery, 4825 Highway 45 North, Jackson, Tennessee 38305 - Attention: Product Service. Be sure to include all of the information shown on the nameplate of your tool (model number, type, serial number, etc.)

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable • Delta Factory Service Centers, and Delta Authorized Service Stations. Please visit our Web Site www.deltamachinery.com for a catalog or for the name of your nearest supplier.

⚠ WARNING Since accessories other than those offered by Delta have not been tested with this product, use of such accessories could be hazardous. For safest operation, only Delta recommended accessories should be used with this product.

WARRANTY

To register your tool for warranty service visit our website at www.deltamachinery.com.

Two Year Limited New Product Warranty

Delta will repair or replace, at its expense and at its option, any new Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. For all refurbished Delta product, the warranty period is 180 days. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.

ACCESORIOS

Una línea completa de accesorios está disponible de su surtidor de Porter-Cable • Delta, centros de servicio de la fábrica de Porter-Cable • Delta, y estaciones autorizadas delta. Visite por favor nuestro Web site www.deltamachinery.com para un catálogo o para el nombre de su surtidor más cercano.

⚠ ADVERTENCIA Puesto que los accesorios con excepción de éstos ofrecidos por Delta no se han probado con este producto, el uso de tales accesorios podría ser peligroso. Para la operación más segura, solamente el delta recomendó los accesorios se debe utilizar con este producto.

GARANTIA

Para registrar la herramienta para obtener el mantenimiento cubierto por la garantía de la herramienta, visite nuestro sitio web en www.deltamachinery.com.

Garantía limitada de dos años para productos nuevos

Delta reparará o reemplazará, a expensas y opción propias, cualquier máquina nueva, pieza de máquina nueva o accesorio de máquina nuevo Delta que durante el uso normal haya presentado defectos de fabricación o de material, siempre que el cliente devuelva el producto con el transporte prepago a un centro de servicio de fábrica Delta o una estación de servicio autorizado Delta, con un comprobante de compra del producto, dentro del plazo de dos años y dé a Delta una oportunidad razonable de verificar el supuesto defecto mediante la realización de una inspección. Para todos los productos Delta reacondicionados, el periodo de garantía es de 180 días. Delta podrá requerir que los motores eléctricos sean devueltos con el transporte prepago a una estación autorizada de un fabricante de motores para ser sometidos a inspección y reparación o para ser reemplazados. Delta no será responsable de ningún defecto alegado que haya resultado del desgaste normal, uso indebido, abuso o reparación o alteración realizada o autorizada específicamente por alguien que no sea un centro de servicio autorizado Delta o un representante autorizado Delta. Delta no será responsable en ninguna circunstancia de los daños incidentales o emergentes que se produzcan como resultado de productos defectuosos. Esta garantía es la única garantía de Delta y establece el recurso exclusivo del cliente en lo que respecta a los productos defectuosos; Delta rechaza expresamente todas las demás garantías, expresas o implícitas, tanto de comerciabilidad como de idoneidad para un propósito o de cualquier otro tipo.

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